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MICHAEL BEST & FRIEDRICH LLP
100 E WISCONSIN AVENUE
Suite 3300
MILWAUKEE, WI 53202

EXAMINER
HAILE, AWET A

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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 March 2007*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-6,8-12 and 14-21* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-6, 8-12 and 14-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on **03/13/2007** has been entered.

Response to Argument

2.   Applicant's arguments with respect to claims **1, 3-6, 8-12, 14-16 and 18-21** have been

considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

4.   **Claims 1, 3-6, 8-12, 14-16 and 18-21** are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject

matter which applicant regards as the invention.

Regarding **claim 1**, line 4 recites "this edge router". It is unclear whether " this edge

router " refers to "each edge router" in line 3 or another edge router . For the purpose of

examining the claim "this edge router" refers to "each edge router" in line 3.

Regarding **claim 6**, line 11 recites "this edge router". It is unclear whether " this edge router " refers to "each edge router" in line 10 or another edge router . For the purpose of examining the claim "this edge router" refers to "each edge router" in line 11.

Regarding **claim 12**, line 8 recites "this edge router". It is unclear whether " this edge router " refers to "each edge router" in line 7 or another edge router . For the purpose of examining the claim "this edge router" refers to "each edge router" in line 7.

Regarding **claim 16**, line 8 recites "this edge router". It is unclear whether " this edge router " refers to "each edge router" in line 7 or another edge router . For the purpose of examining the claim "this edge router" refers to "each edge router" in line 7.

Claims 3-5, 8-11, 14, 15 and 18-21 are rejected as being dependent of rejected independent claims.

Claim Rejections – 35 USC§ 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

7.   **Claims 1, 3, 5, 16, 18, 20 and 21** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Li et al (hereinafter referred as Li '119) in view of Murphy et al (US 7477657

B1).

        Regarding claim 1, Li '119 discloses, a method for realizing QoS guarantee in a MPLS

network having a number of edge routers(see Figs. 3-4, and paragraphs 99, 170-172, i.e. Edge

routers R1-R4) comprising: creating QoS resource list in each edge router to record resource

state corresponding to a path (see paragraphs 40-44, 172-177 and Figs. 4-5, i.e., each of the edge

routers forming a quality of service edge router list, related to resources between source APP1

and destination APP2).

        Li '119 does not explicitly teach, creating an individual QoS resource list, wherein the

resource states of the paths from this edge router to all other edge routers in the same domain are

recorded in said individual QoS resource list; and each edge router assigning resources to a user

terminal which makes a request based on said QoS resource list and then updating the QoS

resource list correspondingly.

        Murphy '657 teaches, creating an individual QoS resource list(see column 4 lines 14-37,

column 5 lines 52-63 and Figs. 1, 3, 4, i.e., each of edge routers 8A, 8B creating QOS resource

list for the paths 9), wherein the resource states of the paths from this edge router to all other

edge routers in the same domain are recorded in said individual QoS resource list(see column 5

lines 52-63, column 6 lines 56- column 7 line 37 and Figs. 1, 3, 4, i.e. recording resource states

for the path 1(LSP1) and path 2(LSP2) from/to edge router 8A and edge router 8B in the path

data 55); and each edge router assigning resources to a user terminal which makes a request

based on said QoS resource list(see column 7 line 39-67, column 8 lines 41-67 and Figs, 4, 5-7 ,

i.e., edge routers 8A and 8B assigning resources based on path data and mapping data, which records resource states for paths between edge router 8A and 8B) and then updating the QoS resource list correspondingly(see column 7 lines 39-67, column 8 lines 41-67, and Figs, 4, 5-7, i.e., edge routers 8A and 8B updating path data 55 and mapping data 57 based on current assigned/usage bandwidth and total bandwidth supported for each path).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of recording resource states of all paths from edge router, assigning resources and updating the resources list after assignment as taught by Murphy '657, into the communication system of Li '119, since such modification would provide efficient way of end-to-end resource reservation protocols support, as suggested by Murphy '657 (paragraph 7).

Regarding claim 3, Li '119 discloses, a method characterized in that the step of creating the QoS resource list further comprises pre-configuring LSPs based on service class to set different LSPs for different service classes (see paragraphs 10, 172, 177-179 and Figs. 4, 5, i.e., obtaining quality of service edge router list of edge routers in same domain to determine available resources); said edge router obtaining resource information of the path from the edge router to each of the other edge routers in the same domain based on LSP resource state information and route information of said MPLS network, and saving the resource information in the QoS resource list(see paragraphs 29, 175-179 and Figs. 4-5, i.e., each of the edge nodes adding updating the quality of service edge routers list and forwarding a service request based on the routers list).

Regarding claim 5, Li '119 discloses, said QoS resource list at least includes

information of the egress edge router(see paragraphs 175-177 and Figs. 4-5, i.e., quality of

service edge router list comprising information related to egress routers 2 and 4), service class(

see 93-96 i.e., each edge node treating each data flow/ path according to it's assigned class of

services), LSP resources (see paragraphs 172-177 and Figs. 4-5, i.e., quality of service edge

router list comprising information related to edge routers from source APP1 to APP2) and

available resources (see paragraphs 175-177 and Figs. 4-5, i.e., quality of service edge router list

comprising information related to resources between each of the edge routers).

Regarding claim 16, Li '119 discloses, an edge router for a MPLS network(see Figs. 3-

4, and paragraphs 99, 170-172, i.e. Edge routers R1-R4), comprising: a QoS resource list for

recording a number of resource states corresponding to a number of paths(see paragraphs 40-44,

172-177 and Figs. 4-5, i.e., each of the edge routers forming a quality of service edge router list,

related to resources between source APP1 and destination APP2);

and an access and resource control unit for accessing or rejecting a resource request from

a user terminal based on information recorded in the QoS resource list and updating said QoS

resource list(see Paragraphs 40-46, 172-176 and Figs. 4-5, i.e., each of the edge nodes updating

the quality of service edge router list, by adding/removing routing ID to the quality of service

edge router list, related to resources between source APP1 and destination APP2, Li also teaches

an edge node rejecting resource requests based on the quality of service edge router list).

Li '119 does not explicitly teach updating said QoS resource list correspondingly,

wherein said QoS resource list is created in each edge router, the resource states of the paths

from this edge router to all other edge routers in the same domain are recorded in said QoS

resource list.

Murphy '657 teaches access and resource control unit for accessing **or** rejecting a

resource request from a user terminal based on information recorded in the QoS resource list(see

column 7 line 39-67, column 8 lines 41-67 and Figs, 4, 5-7 , i.e., edge routers 8A and 8B

assigning resources based on path data and mapping data, which records resource states for paths

between edge router 8A and 8B) and updating said QoS resource list correspondingly(see

column 7 lines 39-67, column 8 lines 41-67, and Figs, 4, 5-7, i.e., edge routers 8A and 8B

updating path data 55 and mapping data 57 based on current assigned/usage bandwidth and total

bandwidth supported for each path), wherein said QoS resource list is created in each edge

router(see column 4 lines 14-37, column 5 lines 52-63 and Figs. 1, 3, 4, i.e., each of edge routers

8A, 8B creating QOS resource list for the paths 9), the resource states of the paths from this edge

router to all other edge routers in the same domain are recorded in said QoS resource list(see

column 5 lines 52-63, column 6 lines 56- column 7 line 37 and Figs. 1, 3, 4, i.e., recording

resource states for the path 1(LSP1) and path 2(LSP2) from/to edge router 8A and edge router

8B in the path data 55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate, the method of recording resource states of all paths from

edge router, assigning resources and updating the resources list after assignment as taught by

Murphy '657, into the communication system of Li '119, since such modification would provide

efficient way of end-to-end resource reservation protocols support, as suggested by Murphy '657

(paragraph 7).

Regarding claim 18, Li '119 discloses a method further including a route list and a

MPLS list based on which said QoS resource list is created and corresponds to LSP resource

state of the MPLS network (see paragraph 179 and Figs.4-5, i.e. creating a routing list in an

MPLS network).

Regarding claim 20, Li '119 discloses, said QoS resource list at least includes

information of an egress edge router(see paragraphs 175-177 and Figs. 4-5, i.e., quality of

service edge router list comprising information related to egress routers 2 and 4), service class(

see 93-96 i.e., each edge node treating each data flow/ path according to it's assigned class of

services), LSP resources (see paragraphs 172-177 and Figs. 4-5, i.e., quality of service edge

router list comprising information related to edge routers from source APP1 to APP2) and

available resources (see paragraphs 175-177 and Figs. 4-5, i.e., quality of service edge router list

comprising information related to resources between each of the edge routers).

Regarding claim 21, Li '119 discloses a MPLS network for realizing QOS guarantee(

see paragraphs 99, 170-175, i.e. MPLS network with a Qos is disclosed) , comprising an edge

router for a MPLS network(see Figs. 3-4, and paragraphs 99, 170-172 and Fig. 4-5, i.e. Edge

routers R1-R4), comprising: a QoS resource list for recording a number of resource states

corresponding to a number of paths(see paragraphs 40-44, 172-177 and Figs. 4-5, i.e., each of the

edge routers forming a quality of service edge router list, related to resources between source

APP1 and destination APP2);

and an access and resource control unit for accessing or rejecting a resource request from

a user terminal based on information recorded in the QoS resource list and updating said QoS

resource list(see Paragraphs 40-46, 172-176 and Figs. 4-5, i.e., each of the edge nodes updating

the quality of service edge router list, by adding/removing routing ID to the quality of service

edge router list, related to resources between source APP1 and destination APP2, Li also teaches

an edge node rejecting resource requests based on the quality of service edge router list).

8.   **Claims 6, 10 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Li

'119 in view of Rabie et al (hereinafter referred as Rabie '829) US Publication No.

2003/0076829 A1 and Murphy '657.

      Regarding claim 6, Li '119 discloses, a method for establishing a QoS data path in a

MPLS network, including: a user terminal sending a QoS resource request to an ingress edge

router (see paragraphs 40, 170-172 and Figs. 4-5, i.e. a resource terminal transmitting a source

request to an edge node);

      said edge router determining information of a path to an egress edge router of the QoS

resource request (see paragraphs 44, 172-175 and Figs. 4-5, i.e., an edge router which receives

the resource allocation message from the source terminal, determines the resource allocation path

according to the stored edge router list, transmits the resource allocation message for the data

flow along the determined resource allocation path); when the resource request is determined to

be accessed, updating said QoS resource list(see paragraphs 47-49, 175-179 and Figs. 4-5, i.e., if

there are enough resources to be allocated, the edge router perform resource allocation, and each

of the edge nodes updating the quality of service edge router list, by adding/removing routing ID

to the quality of service edge router list, related to resources between source APP1 and

destination APP2).

Li '119 is silent on, said ingress edge router determining whether the resource request is

accessed or rejected based on comparing available resources corresponding to the path of

recorded in said QoS resource list with bandwidth requested in said resource request.

Rabie '829, discloses said ingress edge router determining whether the resource request is

accessed or rejected based on comparing available resources corresponding to the path of

recorded in said QoS resource list with bandwidth requested in said resource request (see

paragraphs 37-41, i.e., determining whether the service category requested can be supported by

comparing the available bandwidth for the link/pool with the calculated reserved bandwidth).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate, the method of determining whether the resource request is

allowed based on comparison of available bandwidth with the resource request as taught by

Rabie '829, into the communication system of Li '119, in order to result in an optimal route

through the network that satisfies the bandwidth requirement, as suggested by Rabie '829 (see

paragraph 39).

The combination of Li '119 and Rabie '829 does not explicitly teach, updating said QoS

resource list correspondingly, wherein said QoS resource list is created in each edge router, and

the resource states of the paths from this edge router to all the other edge routers in the same

domain are recorded in said QoS resource list.

Murphy '657 teaches, updating said QoS resource list correspondingly(see column 7

lines 39-67, column 8 lines 41-67, and Figs, 4, 5-7, i.e., edge routers 8A and 8B updating path

data 55 and mapping data 57 based on current assigned/usage bandwidth and total bandwidth

supported for each path), wherein said QoS resource list is created in each edge router(see

column 4 lines 14-37, column 5 lines 52-63 and Figs. 1, 3, 4, i.e., each of edge routers 8A, 8B

creating QOS resource list for the paths 9), and the resource states of the paths from this edge

router to all the other edge routers in the same domain are recorded in said QoS resource list(see

column 5 lines 52-63, column 6 lines 56- column 7 line 37 and Figs. 1, 3, 4, i.e., recording

resource states for the path 1(LSP1) and path 2(LSP2) from/to edge router 8A and edge router

8B in the path data 55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate, the method of recording resource states of all paths from

edge router, assigning resources and updating the resources list after assignment as taught by

Murphy '657, into the modified communication system of Li '119, since such modification

would provide efficient way of end-to-end resource reservation protocols support, as suggested

by Murphy '657 (paragraph 7).

Regarding claim 10, Li '119 discloses, the step of updating the QoS resource list further

includes: subtracting the bandwidth resources requested in said QoS resource request from the

available resources of the corresponding requested resources in said QoS resource list (see

paragraphs 49, 172-179, i.e., a method of updating the bandwidth allocated to each of the

sources is disclosed).

Regarding claim 11, Li '119 discloses, said QoS resource list at least includes

information of the egress edge router(see paragraphs 175-177 and Figs. 4-5, i.e., quality of

service edge router list comprising information related to egress routers 2 and 4), service class(

see 93-96 i.e., each edge node treating each data flow/ path according to it's assigned class of

services), LSP resources (see paragraphs 172-177 and Figs. 4-5, i.e., quality of service edge

router list comprising information related to edge routers from source APP1 to APP2) and

available resources (see paragraphs 175-177 and Figs. 4-5, i.e., quality of service edge router list

comprising information related to resources between each of the edge routers).

9.   **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurose et al.

(hereinafter referred as Kurose '089) US Publication No. 2003/0084089 A1 in view of Murphy

'657 .

     Regarding claim 12, Kurose '089 discloses, a method for terminating QoS data

transmission in a MPLS network, including: an ingress edge router receiving a resource releasing

request from a user terminal (see Fig.1 and paragraph 91-93, i.e., the user terminal transmit a

request to the ingress router to request a communication resource resservbility); said ingress edge

router releasing the resources occupied by said user terminal (see paragraph 141, when it's

determined that the data are the resource release requests, the edge router releases the

communication resource of the ingress router).

     Kurose '089 is silent on, said ingress edge router correspondingly modifying its QoS

resource list which records resource state corresponding to a path, wherein said QoS resource list

is created in each edge router, and the resource states of the paths from this edge router to all the

other edge routers in the same domain are recorded in said QoS resource list.

     Murphy '657 teaches, said ingress edge router correspondingly modifying its QoS

resource list which records resource state corresponding to a path (see column 7 lines 39-67,

column 8 lines 41-67, and Figs, 4, 5-7, i.e., edge routers 8A and 8B updating path data 55 and

mapping data 57 based on current assigned/usage bandwidth and total bandwidth supported for

each path), wherein said QoS resource list is created in each edge router (see column 4 lines 14-

37, column 5 lines 52-63 and Figs. 1, 3, 4, i.e., each of edge routers 8A, 8B creating QOS

resource list for the paths 9), and the resource states of the paths from this edge router to all the

other edge routers in the same domain are recorded in said QoS resource list (see column 5 lines

52-63, column 6 lines 56- column 7 line 37 and Figs. 1, 3, 4, i.e., recording resource states for

the path 1(LSP1) and path 2(LSP2) from/to edge router 8A and edge router 8B in the path data

55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate, the method of recording resource states of all paths from

edge router, assigning resources and updating the resources list after assignment as taught by

Murphy '657, into the communication system of Kurose '089, since such modification would

provide efficient way of end-to-end resource reservation protocols support, as suggested by

Murphy '657 (paragraph 7).

10.   **Claims 14 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurose

'089 and Murphy '657 as applied to claims above, and further in view of Li '119.

Regarding claim 14, the combination of Kurose '089 and Murphy '657 does not

explicitly teach, on, a method characterized in that the step of modifying the QoS resource list

further includes: adding corresponding amount to available QoS resources corresponding to an

egress edge router of said QoS data transmission in the QoS resource list.

Li '119 teaches, a method characterized in that the step of modifying the QoS resource

list further includes: adding corresponding amount to available QoS resources corresponding to

an egress edge router of said QoS data transmission in the QoS resource list (see paragraphs 100,

172-177 and Figs. 4-5, i.e., each of the edge routers forming a quality of service edge router list, related to resources between source APP1 and destination APP2 paths).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of edge routers forming a quality of service edge router list, related to resources between source APP1 and destination APP2 paths as taught by Li '119, into the modified communication system of Kurose '089, in order to reduce flow state information maintained at the network nodes as well as overhead of signaling processing and storage at the network nodes, as suggested by Li '119 (see abstract).

Regarding claim 15, the combination of Kurose '089 and Murphy '657 does not explicitly teach a method characterized in that said QoS resource list at least includes information of the egress edge router, service class, LSP resources and available resources.

Li '119 teaches, said QoS resource list at least includes information of the egress edge router(see paragraphs 175-177 and Figs. 4-5, i.e., quality of service edge router list comprising information related to egress routers 2 and 4), service class(see 93-96 i.e., each edge node treating each data flow/ path according to it's assigned class of services), LSP resources (see paragraphs 172-177 and Figs. 4-5, i.e., quality of service edge router list comprising information related to edge routers from source APP1 to APP2) and available resources (see paragraphs 175-177 and Figs. 4-5, i.e., quality of service edge router list comprising information related to resources between each of the edge routers).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of creating QoS resource list at least including information of the egress edge router, service class, LSP resources and available resources as

taught by Li '119, into the modified communication system of Kurose '089, in order to reduce

flow state information maintained at the network nodes as well as overhead of signaling

processing and storage at the network nodes, as suggested by Li '119 (see abstract).

11.   **Claims 4 and 19** rejected under 35 U.S.C. 103(a) as being unpatentable over Li '119 and

Murphy '657   as applied to claim(s) above, and further in view of Matsubara et al (hereinafter

referred as Matsubara '640) US Patent No. 7, 215, 640 B.

     Regarding claim 4, the combination of Li '119 and Murphy '657 teaches, edge router

receiving a resource request from the user terminal (see Murphy '657 , column 7 lines 39-67,

column 8 lines 41-67, and Figs, 4, 5-7, i.e., edge routers 8A and 8B updating path data 55 and

mapping data 57 based on current assigned/usage bandwidth and total bandwidth supported for

each path), edge router searching said QoS resource list for available information of the

requested resources based on an egress edge router in said resource request (see Murphy '657,

column 7 lines 39-67, column 8 lines 41-67, and Figs, 4, 5-7, i.e., edge routers 8A and 8B

updating path data 55 and mapping data 57 based on current assigned/usage bandwidth and total

bandwidth supported for each path).

     The combination of Li '119 and Murphy '657 does not explicitly teach, edge router

determining whether the resource request is accessed or rejected based on the available

information of said requested resources when the resource request is determined to be accessed,

modifying the available information of the requested resources in said QoS resource list and

sending an acknowledgement message to said user terminal.

     Matsubara '640 teaches, said edge router determining whether the resource request is

accessed or rejected based on the available information of said requested resources (See

Matsubara Col 6; lines 53-63); when the resource request is determined to be accessed,

modifying the available information of the requested resources in said QoS resource list and

sending an acknowledgement message to said user terminal (See Matsubara Col 11; lines 30-33).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate, the method of determining whether the resource request is

accessed or rejected based on the available information of said requested resources as taught by

Matsubara '640 into the modified communion system of Li '119, in order to reduces network

storage capacity requirements and computational load as compared to a conventional pre-set path

system, as suggested by Matsubara '640(see abstract).

Regarding claim 19, Li '119 discloses, a data transmission unit which, under the control

of said access and resource control unit, performs operations such as classifying(see 93-96 i.e.,

each edge node treating each data flow/ path according to it's assigned class of services),

marking (see 93-96 i.e., each edge node updating the resource list).

The combination of Li '119 and Murphy '657 does not explicitly teach, queuing and

scheduling on data transmitted by the user terminal.

Matsubara '640 teaches, queuing and scheduling on data transmitted by the user terminal

(see column 11 and Fig 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate, the method of queuing and scheduling on data transmitted by

the user terminal as taught by Matsubara '640 into the combined communion system of Li '119

and Murphy '657, in order to reduces network storage capacity requirements and computational

load as compared to a conventional pre-set path system, as suggested by Matsubara '640(see

abstract).

12.   **Claims 8 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Li '119,

Rabie '829 and Murphy '657 as applied to claim(s) above, and further in view of Matsubara

'640.

　　　　Regarding claim 8, the combination of Li '119, Rabie '829 and Murphy '657 does not

explicitly teach, comparing available resources of the requested resources in said QoS resource

list with bandwidth resources requested in said resource request; if said available resources are

less than said bandwidth resources, sending a message of rejecting access to said user terminal,

otherwise allowing said user terminal to access.

　　　　Matsubara '640 discloses, comparing available resources of the requested resources in

said QoS resource list with bandwidth resources requested in said resource request (See

Matsubara Col 6; lines 64-67); if said available resources are less than said bandwidth resources,

sending a message of rejecting access to said user terminal, otherwise allowing said user terminal

to access (see Matsubara Col 7; lines 15-21).

　　　　Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate, the method of comparing available resources of the requested

resources in a QoS resource list with bandwidth resources requested in resource request as taught

by Matsubara '640, into the modified communication method of Li '119, in order to reduces

network storage capacity requirements and computational load as compared to a conventional

pre-set path system, as suggested by Matsubara '640(see abstract).

Regarding claim 9, Li '119 discloses,: when the resource request is not cross-domain, said edge router sending the resource request to a destination user terminal in said resource request and waiting for an acknowledgement message from the destination user terminal (see paragraph 0178); when the resource request is cross-domain, said edge router searching for a domain which is close to the destination user terminal in said resource request and has available resources larger than said bandwidth resources, sending the resource request to an edge router of the domain and waiting for an acknowledgement message from the edge router of the domain (see paragraphs 175-179 and Figs, 4-5).

Li '119, Murphy '657 and Rabie '829 are silent on, after receiving the acknowledgement message, said edge router sending the acknowledgement message to said user terminal; and after receiving the acknowledgement message, said user terminal starts the data transmission.

Matsubara '640 teaches, after receiving the acknowledgement message, said edge router sending the acknowledgement message to said user terminal; and after receiving the acknowledgement message, said user terminal starts the data transmission(see Matsubara Col 11; lines 30-33).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of comparing available resources of the requested resources in a QoS resource list with bandwidth resources requested in resource request as taught by Matsubara '640, into the modified communication method of Li '119, in order to reduces network storage capacity requirements and computational load as compared to a conventional pre-set path system, as suggested by Matsubara '640(see abstract).

Conclusion

13.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure, Masuda et al(US 2002/0059432 A1) and Matsubara et al(US 2004/0202159 A1) are

recited to show method of providing quality of service in an MPLS network.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to AWET HAILE whose telephone number is (571)270-3114. The

examiner can normally be reached on Monday through Friday 8:30 AM - 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

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/AUNG S. MOE/   /AWET HAILE/
Supervisory Patent Examiner, Art Unit 2474   Examiner, Art Unit 2474